

### REMARKS

The claims have been amended in order to more completely describe and distinctly claim the invention and to overcome the various grounds of rejection set forth in the Official Letter. Inasmuch as no new matter is embodied by the proposed amendments, entry thereof is respectfully requested.

The Examiner's objections to the claim set forth at page 2 is believed to be overcome by the above amendments. Accordingly, withdrawal of these grounds of objection is respectfully requested.

The rejection of the claims under 35 USC 112, first paragraph, on the ground that the specification does not enable claims "excluding the *trans* isomers of the compounds having the structures ---" is respectfully traversed. The current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation or an exclusionary proviso. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 U.S.C. 112, second paragraph.

A claim which recited the limitation "not in excess of 10% . . . structure" in order to exclude the characteristics of the prior art product, was considered definite because each recited limitation was definite. In re Wakefield, 422 F.2d 897, 164 USPQ 636 (CCPA 1970). In addition, the court found that the negative limitation "incapable of forming a dye with said oxidized developing agent" was definite because the boundaries of the patent protection sought were clear. In re Barr, 444 F.2d 588, 170 USPQ 330 (CCPA 1971).

The MPEP [Section 2173.05(i)] states:

“---Any negative limitation or exclusionary proviso must have basis in the original disclosure. See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative

limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a prima facie case for lack of descriptive support. Ex parte Parks, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993). See MPEP 2163 - # 2163.07(b) for a discussion of the written description requirement of 35 U.S.C. 112, first paragraph---".

It is respectfully submitted that the present claim language complies with the first paragraph of 35 U.S.C. 112 as interpreted by the MPEP and the *Parks* and *Grasselli* decisions. Moreover, attention is directed to the decision in *In re Johnson*, 223 USPQ 1260 holding that a claim to a genus with a recital of a negative proviso that did not appear in the specification complied with the *description* requirement. The negative proviso had the effect of excluding from the scope of the claim two species originally disclosed in the specification as within the invention, and was inserted to avoid having the claims read on a lost interference count. The claim recited a formula O-E-O-E', wherein E and E' were both positively defined, and ended "with the provisos that E and E' may not both include a divalent sulfone group and may not both include a divalent carbonyl group linking two aromatic nuclei." The proviso literally excluded more than the two species. The court stated:

“---The notion that one who fully discloses and teaches those skilled in the art how to make and use a genus and numerous species therewithin, has somehow failed to disclose, and teach those skilled in the art how to make and use, that genus minus two of those species, and has thus failed to satisfy the requirements of §112, first paragraph, appears to result in hypertechnical application of legalistic prose relating to that provision of the statute---”.

The court had another opportunity to review "the sort of 'hypertechnical application' of the written description requirement of §112 criticized in [*Johnson*]" in *In re Driscoll*, 195 USPQ 434, 438. In holding that a disclosure of a group of chemical compounds containing a plurality of groups defined by Markush terminology, one of which groups contained 14 members, *described* the same group of compounds otherwise identical except that the 14-member group was now limited to only one of the members, the court stated:

“---Were the board's decision permitted to stand, future applicants, particularly in cases of this nature, would in all likelihood find themselves in the predicament reflected in the following observation by Judge Learned Hand:

If, when [applicants] yield any part of what they originally believed to be their due, they substitute a new "invention," only two courses will be open to them: they must at the outset either prophetically divine what the art contains, or they must lay down a barrage of claims, starting with the widest and proceeding by the successive incorporation of more and more detail, until all combinations have been exhausted which can by any possibility succeed. The first is an impossible task; the second is a custom already more honored in the breach than in the observance, and its extension would only increase that surfeit of verbiage which has for long been the curse of patent practice, and has done much to discredit it. *It is impossible to imagine any public purpose which it would serve---*”.

It is impossible to quarrel with the above passages. Indeed, it is doubtful that an inventor, ignorant of the precepts and nuances of patent law, after discovering that a species or a subgenus of a genus that he regards as his invention is old or obvious, would not believe that he *possessed*, at the time he invented the genus, that genus minus the old or obvious species or subgenus. In *Johnson*, the inventors were permitted to exclude the old or obvious species, ostensibly because they literally disclosed these species in their specification. The fact that Johnson actually excluded somewhat more than the two species was seemingly unimportant to the court, since this fact was relegated to a footnote that had no discussed bearing on the court's decision.

Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 USC 112, second paragraph, as being indefinite in reciting the *trans* isomer is respectfully traversed. There is nothing inconsistent between claim 1 and claim 2 since claim 1 only excludes the specific *trans* isomers specified. Those isomers are also excluded by claim 2 which is dependent upon claim 1. Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of claims 1-6 under 35 USC 103 as obviously unpatentable over Bergeron is respectfully traversed.

**This document contains one section of the Manual of Patent Examining Procedure (the "MPEP"), Seventh Edition (July 1998). This page was last updated in April 2000. All of the sections of the MPEP are found in the section index. 2144.09 Close Structural Similarity Between Chemical Compounds (Homologs, Analogues, Isomers)**

**REJECTION BASED ON CLOSE STRUCTURAL SIMILARITY IS FOUNDED ON THE EXPECTATION THAT COMPOUNDS SIMILAR IN STRUCTURE WILL HAVE SIMILAR PROPERTIES**

A prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed below and in MPEP Section 2144) for an extensive review of the case law pertaining to obviousness based on close structural similarity of chemical compounds. See also MPEP Section 2144.08, paragraph II.A.4.(c).

**HOMOLOGY AND ISOMERISM ARE FACTS WHICH MUST BE CONSIDERED WITH ALL OTHER RELEVANT FACTS IN DETERMINING OBVIOUSNESS**

Compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH<sub>2</sub>- groups) are

generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). See also In re May, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978) (stereoisomers prima facie obvious).

Isomers having the same empirical formula but different structures are not necessarily considered equivalent by chemists skilled in the art and therefore are not necessarily suggestive of each other. Ex parte Mowry, 91 USPQ 219 (Bd. App. 1950) (claimed cyclohexylstyrene not prima facie obvious over prior art isohexylstyrene). Similarly, homologs which are far removed from adjacent homologs may not be expected to have similar properties. In re Mills, 281 F.2d 218, 126 USPQ 513 (CCPA 1960) (prior art disclosure of C8 to C12 alkyl sulfates was not sufficient to render prima facie obvious claimed C1 alkyl sulfate).

Homology and isomerism involve close structural similarity which must be considered with all other relevant facts in determining the issue of obviousness. In re Mills, 281 F.2d 218, 126 USPQ 513 (CCPA 1960); In re Wiechert, 370 F.2d 927, 152 USPQ 247 (CCPA 1967). Homology should not be automatically equated with prima facie obviousness because the claimed invention and the prior art must each be viewed "as a whole." In re Langer, 465 F.2d 896, 175 USPQ 169 (CCPA 1972) (Claims to a polymerization process using a sterically hindered amine were held unobvious over a similar prior art process because the prior art disclosed a large number of unhindered amines and only one sterically hindered amine (which differed from a claimed amine by 3 carbon atoms), and therefore the reference as a whole did not apprise the ordinary artisan of the significance of hindered amines as a class.).

PRESENCE OF A TRUE HOMOLOGOUS OR ISOMERIC RELATIONSHIP IS NOT  
CONTROLLING

Prior art structures do not have to be true homologs or isomers to render structurally similar compounds *prima facie* obvious. In *re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979) (Claimed and prior art compounds were both directed to heterocyclic carbamoyloximino compounds having pesticidal activity. The only structural difference between the claimed and prior art compounds was that the ring structures of the claimed compounds had two carbon atoms between two sulfur atoms whereas the prior art ring structures had either one or three carbon atoms between two sulfur atoms. The court held that although the prior art compounds were not true homologs or isomers of the claimed compounds, the similarity between the chemical structures and properties is sufficiently close that one of ordinary skill in the art would have been motivated to make the claimed compounds in searching for new pesticides.).

See also *In re Mayne*, 104 F.3d 1339, 41 USPQ2d 1451 (Fed. Cir. 1997) (claimed protein was held to be obvious in light of structural similarities to the prior art, including known structural similarity of Ile and Leu); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (claimed and prior art compounds used in a method of treating depression would have been expected to have similar activity because the structural difference between the compounds involved a known bioisosteric replacement) (see MPEP Section 2144.08, paragraph II.A.4(c) for a more detailed discussion of the facts in the *Mayne* and *Merck* cases); *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (The tri-orthoester fuel compositions of the prior art and the claimed tetra-orthoester fuel compositions would have been expected to have similar properties based on close structural

and chemical similarity between the orthoesters and the fact that both the prior art and applicant used the orthoesters as fuel additives.) (See MPEP Section 2144 for a more detailed discussion of the facts in the Dillon case.).

Compare *In re Grabiak*, 769 F.2d 729, 226 USPQ 871 (Fed. Cir. 1985) (substitution of a thioester group for an ester group in an herbicidal safener compound was not suggested by the prior art); *In re Bell*, 991 F.2d 781, 26 USPQ2d 1529 (Fed. Cir. 1993) (The established relationship between a nucleic acid and the protein it encodes in the genetic code does not render a gene *prima facie* obvious over its corresponding protein in the same way that closely related structures in chemistry may create a *prima facie* case because there are a vast number of nucleotide sequences that might encode for a specific protein as a result of degeneracy in the genetic code (i.e., the fact that most amino acids are specified by more than one nucleotide sequence or codon).); *In re Deuel*, 51 F.3d 1552, 1558-59, 34 USPQ2d 1210, 1215 (Fed. Cir. 1995) ("A prior art disclosure of the amino acid sequence of a protein does not necessarily render particular DNA molecules encoding the protein obvious because the redundancy of the genetic code permits one to hypothesize an enormous number of DNA sequences coding for the protein." The existence of a general method of gene cloning in the prior art is not sufficient, without more, to render obvious a particular cDNA molecule.).

PRESENCE OR ABSENCE OF PRIOR ART SUGGESTION OF METHOD OF MAKING  
A CLAIMED COMPOUND MAY BE RELEVANT IN DETERMINING PRIMA FACIE  
OBVIOUSNESS

"[T]he presence-or absence-of a suitably operative, obvious process for making a composition of matter may have an ultimate bearing on whether that composition is

obvious-or nonobvious-under 35 U.S.C. 103." In re Maloney, 411 F.2d 1321, 1323, 162 USPQ 98, 100 (CCPA 1969).

"[I]f the prior art of record fails to disclose or render obvious a method for making a claimed compound, at the time the invention was made, it may not be legally concluded that the compound itself is in the possession of the public. In this context, we say that the absence of a known or obvious process for making the claimed compounds overcomes a presumption that the compounds are obvious, based on the close relationships between their structures and those of prior art compounds." In re Hoeksema, 399 F.2d 269, 274-75, 158 USPQ 597, 601 (CCPA 1968).

See In re Payne, 606 F.2d 303, 203 USPQ 245 (CCPA 1979) for a general discussion of circumstances under which the prior art suggests methods for making novel compounds which are of close structural similarity to compounds known in the prior art. In the biotechnology arts, the existence of a general method of gene cloning in the prior art is not sufficient, without more, to render obvious a particular cDNA molecule. In re Deuel, 51 F.3d 1552, 1558, 34 USPQ2d 1210, 1215 (Fed. Cir. 1995) ("[T]he existence of a general method of isolating cDNA or DNA molecules is essentially irrelevant to the question whether the specific molecules themselves would have been obvious, in the absence of other prior art that suggests the claimed DNAs."); In re Bell, 991 F.2d 781, 785, 26 USPQ2d 1529, 1532 (Fed. Cir. 1993). However, it may be proper to apply "methodology in rejecting product claims under 35 U.S.C. 103, depending on the particular facts of the case, the manner and context in which methodology applies, and the overall logic of the rejection." Ex parte Goldgaber, 41 USPQ2d 1172, 1176 (Bd. Pat. App. & Inter. 1996).

**PRESUMPTION OF OBVIOUSNESS BASED ON STRUCTURAL SIMILARITY IS**



## OVERCOME WHERE THERE IS NO REASONABLE EXPECTATION OF SIMILAR PROPERTIES

The presumption of obviousness based on a reference disclosing structurally similar compounds may be overcome where there is evidence showing there is no reasonable expectation of similar properties in structurally similar compounds. In *re* May, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978) (appellant produced sufficient evidence to establish a substantial degree of unpredictability in the pertinent art area, and thereby rebutted the presumption that structurally similar compounds have similar properties); In *re* Schechter, 205 F.2d 185, 98 USPQ 144 (CCPA 1953). See also *Ex parte Blattner*, 2 USPQ2d 2047 (Bd. Pat. App. & Inter. 1987) (Claims directed to compounds containing a 7-membered ring were rejected as *prima facie* obvious over a reference which taught 5- and 6-membered ring homologs of the claimed compounds. The Board reversed the rejection because the prior art taught that the compounds containing a 5-membered ring possessed the opposite utility of the compounds containing the 6-membered ring, undermining the examiner's asserted *prima facie* case arising from an expectation of similar results in the claimed compounds which contain a 7-membered ring.).

## IF PRIOR ART COMPOUNDS HAVE NO UTILITY, OR UTILITY ONLY AS INTERMEDIATES, CLAIMED STRUCTURALLY SIMILAR COMPOUNDS MAY NOT BE PRIMA FACIE OBVIOUS OVER THE PRIOR ART

If the prior art does not teach any specific or significant utility for the disclosed compounds, then the prior art is not sufficient to render structurally similar claims *prima facie* obvious because there is no motivation for one of ordinary skill in the art to make the reference compounds, much less any structurally related compounds. In *re* Stemniski, 444

F.2d 581, 170 USPQ 343 (CCPA 1971).

Where structurally similar "prior art compounds `cannot be regarded as useful' for the sole use disclosed [by the reference], . . . a person having ordinary skill in the art would lack the `necessary impetus' to make the claimed compounds." In re Albrecht, 514 F.2d 1389, 1396, 185 USPQ 585, 590 (CCPA 1975) (prior art reference studied the local anesthetic activity of various compounds, and taught that compounds structurally similar to those claimed were irritating to human skin and therefore "cannot be regarded as useful anesthetics." 514 F.2d at 1393, 185 USPQ at 587).

Similarly, if the prior art merely discloses compounds as intermediates in the production of a final product, one of ordinary skill in the art would not have been motivated to stop the reference synthesis and investigate the intermediate compounds with an expectation of arriving at claimed compounds which have different uses. In re Lalu, 747 F.2d 703, 223 USPQ 1257 (Fed. Cir. 1984).

#### PRIMA FACIE CASE REBUTTABLE BY EVIDENCE OF SUPERIOR OR UNEXPECTED RESULTS

A prima facie case of obviousness based on structural similarity is rebuttable by proof that the claimed compounds possess unexpectedly advantageous or superior properties. In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (Affidavit evidence which showed that claimed triethylated compounds possessed anti-inflammatory activity whereas prior art trimethylated compounds did not was sufficient to overcome obviousness rejection based on the homologous relationship between the prior art and claimed compounds.); In re Wiechert, 370 F.2d 927, 152 USPQ 247 (CCPA 1967) (a 7-fold

improvement of activity over the prior art held sufficient to rebut prima facie obviousness based on close structural similarity).

However, a claimed compound may be obvious because it was suggested by, or structurally similar to, a prior art compound even though a particular benefit of the claimed compound asserted by patentee is not expressly disclosed in the prior art. It is the differences in fact in their respective properties which are determinative of nonobviousness. If the prior art compound does in fact possess a particular benefit, even though the benefit is not recognized in the prior art, applicant's recognition of the benefit is not in itself sufficient to distinguish the claimed compound from the prior art. *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991).

*Ex parte Haik*

In respect to the use of D-arginine instead of L-arginine described in the reference, an optically active isomer is unpatentable over a prior art racemate or optical isomer of opposite rotation in the absence of unexpected or unobvious beneficial properties. *In re Adamson et al.*, 125 USPQ 233 (CCPA 1960). *Id.* at 7. Appellant argues that neither Selwood nor Lo disclose the use of arginine to treat a subject in need thereof, nor do the references teach the use of D-arginine, and nor do the references teach or suggest the use of a blood dialysis system. Appeal Brief, page 4. We agree. "In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). The test of obviousness is "whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention." *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). Selwood and Lo, as noted by the rejection, teach that methylglyoxal

covalently binds to blood proteins such as albumin, irreversibly modifying them, and that arginine and N-a-acetyl arginine inhibit that binding by competing for binding to methylglyoxal. There is no teaching or suggestion that arginine or N-a-acetyl arginine may be administered in a dialysis system to block the effects of methylglyoxal, nor do the references teach or suggest the use of D-arginine. The rejection asserts that dialysis is a routine procedure for removal of unnecessary contaminations from blood, and also asserts that the use of the L-isomer renders the use of the D-isomer obvious. But “conclusory statements” as to teaching, suggestion or motivation to arrive at the claimed invention “do not adequately address the issue [of obviousness].” *In re Lee*, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002). Because the examiner has failed to set forth a prima facie case of obviousness, the rejection is reversed.

*Ex parte* Barthelemy

In the ground of rejection under § 103(a), the examiner contends that the perfluorobutyl *ethyl* ethers of Flynn ‘595 is homologous to the perfluorobutyl *methyl* ethers of appealed claim 1 and thus, the substitution of the methyl ether for the ethyl ether in the compositions of the reference would have been obvious, alleging structural similarity, based on the alleged fact that “[i]t is well known in the chemical art [sic, area] to substitute one alkyl chain for another either slightly longer or slightly shorter alkyl chain,” and “[i]n the instant case, a substitution of methyl for ethyl, an alkyl chain on one carbon shorter” (Paper No. 11, page 5; answer, pages 3-5). The examiner further contends in this respect, that the combination of Flynn ‘595 and Flynn ‘812, the therefrom, see *In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir. 1992); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968), presuming skill on latter drawn to perfluorobutyl *methyl* ether and a somewhat similar recitation of organic solvents for the formation of azeotrope-like

compositions but without disclosure of esters containing 4 carbon atoms, that is, acetate and propionate esters (*cf.* Flynn '812, col. 5, line 66, to col. 6, line 38, with Flynn '595, col. 5, lines 45-63), would also have made the substitution of the methyl ether for ethyl ether obvious (Paper No. 11, page 5; answer, pages 3-5). Appellants submit that the examiner's position is based on hindsight because there is no disclosure of an azeotrope-like composition containing perfluorobutyl methyl ether and an ester in Flynn '812, pointing out that esters are disclosed in this reference only as suitable alkylating agents at col. 4, lines 32-44, and the listing of suitable solvents in Flynn '812 differs in this and other respects from the listing of solvents in Flynn '595 (brief, pages 8-11). Thus, appellants argue that the fact that ester solvents are shown by Flynn '595 to be useful in forming azeotrope-like compositions with perfluorobutyl ethyl ethers does not suggest modifying the teachings of azeotrope-like compositions containing perfluorobutyl methyl ethers of Flynn '812 to include ethyl acetate (*id.*, pages 11-12).

On this record, we agree with appellants. In order to establish a *prima facie* case of structural obviousness on this record, the examiner must establish by scientific reasoning and/or objective evidence that adjacent members of the perfluorobutyl ether series would have been expected by one of ordinary skill in the art to have similar properties with respect to azeotrope-like compositions in view of the teachings of the Flynn references. In this respect, we find no evidence advanced by the examiner other than the alleged general similarity between "methyl" and "ethyl" *per se*, and indeed, such a general statement alone does not provide the requisite evidence necessary to establish this position in view of the formation of azeotrope-like compositions with different sets of organic solvents for the perfluorobutyl methyl and ethyl ethers as disclosed by the respective Flynn references, wherein there is no disclosure of the formation of azeotrope-like composition with the perfluorobutyl methyl ether and esters containing 4 carbon atoms in Flynn '292. *See*

*generally, In re Jones*, 958 F.2d 347, 349-51, 21 USPQ2d 1941, 1943-44 (Fed. Cir. 1992) (“Conspicuously missing from this record is any *evidence*, other than the PTO’s speculation (if it be called evidence) that one of ordinary skill in the part of this person. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985). the herbicidal art would have been motivated to make the modifications of the prior art salts necessary to arrive at the claimed . . . salt.”); *In re Dillon*, 919 F.2d 688, 692-93, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990)(*in banc*) (“This court . . . reaffirms that structural similarity between claimed and prior art subject matter, proved by combining references or otherwise, where the prior art gives reason or motivation to make the claimed compositions, creates a *prima facie* case of obviousness, and that the burden (and opportunity) then falls on an applicant to rebut that *prima facie* case.”); *In re Grabiak*, 769 F.2d 729, 731-32, 226 USPQ 870, 872 (Fed. Cir. 1985) (“[W]e have concluded that generalizations should be avoided insofar as specific chemical structures are alleged to be *prima facie* obvious one from the other. . . . [I]n the case before us there must be adequate support in the prior art for the ester/thioester change in structure, in order to complete the PTO’s *prima facie* case and shift the burden of going forward to the applicant.”)

Accordingly, on this record, the examiner has not presented scientific reasoning and/or objective evidence which establishes that one of ordinary skill in this art would have reasonably expected that perfluorobutyl methyl and ether ethers would have similar properties with respect to the formation of azeotrope-like compositions, and thus, would have expected that any organic solvent used with one ether would also be useful with the other ether to form such a composition, and thus has not provided the necessary factual foundation to establish a *prima facie* case of obviousness. Therefore, in the absence of a *prima facie* case of obviousness, we reverse the ground of rejection under § 103(a). Accordingly, withdrawal of this ground of rejection is respectfully requested.

Appln. No. 10/091,591  
Reply to Office Action of Sept. 22, 2004

The prior art cited by the Examiner but not relied upon has been carefully reviewed. These references will not be discussed in detail. Suffice it to state that none of the references, either alone or in combination, disclose or suggest the claimed invention.

Applicants have earnestly endeavored to place this application in condition for allowance and an early action to that end is respectfully requested.

Respectfully submitted,

Miles & Stockbridge

A handwritten signature in black ink, appearing to read 'Dennis P. Clarke', is written over a horizontal line.

Dennis P. Clarke  
Registration No. 22,549

Date: October 14, 2004

DPC/maa

Customer No. 000181

1751 Pinnacle Drive  
Suite 500  
McLean, Virginia 22102-3833  
Telephone: (703) 903-9000  
Facsimile: (703) 610-8686  
E-mail: dclarke@milestockbridge.com